

CLAIMS

1 – Process for conservation of a cellulosic material, comprising a treatment wherein said cellulosic material is contacted with a stabilising agent, and at least one of the cellulosic material or the stabilising agent is cooled before  
5 and/or during the treatment.

2 – Process according to claim 1, wherein at least one of the cellulosic material or the stabilising agent is cooled to a temperature which is less than 20°C.

3 – Process according to claim 2, wherein the temperature is from -50°C to  
10 0°C, preferably from -20°C to -5°C.

4 – Process according to claim 2 or 3, wherein the treatment is carried out at said temperature.

5 – Process according to anyone of claims 1 to 4, wherein the cellulosic material and the stabilising agent have substantially the same temperature as they  
15 are being contacted.

6 – Process according to anyone of claims 1 to 4, wherein the stabilising agent is selected from fibre strengtheners, sizing agents, antioxidants, biocides and/or deacidification agents.

7 – Process according to claim 6, wherein the stabilising agent is a  
20 deacidification agent.

8 – Process according to claim 7, wherein the deacidification agent comprises a base selected from basic alkaline earth metal derivatives, in particular magnesium or calcium compounds or salts.

9 – Process according to claim 7 or 8, wherein the deacidification agent  
25 comprises a solvent selected from alcohols, in particular having 1 to 4 carbon atoms, and non-halogenated or halogenated hydrocarbon solvents or ethers.

10 – Process according to anyone of claims 7 to 9, wherein the deacidification agent comprises a hydrofluoroalkane, preferably selected from HFC-227ea and HFC-134a.

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11 – Process according to claim 10, wherein the deacidification agent is a composition of magnesium propylcarbonate, propanol and HFC-227ea.

12 – Process according to anyone of claims 1 to 11, wherein the treatment is carried out for a duration of from 1 to 50 hours.

5        13 – Process according to anyone of claims 1 to 12, wherein the cellulosic material is not dried before the treatment.

14 – Process according to anyone of claims 1 to 12, wherein the cellulosic material is dried before the treatment so that it loses about 1% or 2% of moisture content weight by weight.

10        15 – Process according to anyone of claims 1 to 14, which comprises :

(a) cooling the stabilising agent;

(b) contacting the cellulosic material and the stabilising agent cooled in step (a), preferably in a treatment chamber which has optionally been cooled before introducing the cellulosic material;

15        (c) optionally, separating excess quantities of stabilising agent or constituents of the stabilising agent from the cellulosic material;

(d) optionally, recovering excess quantities or constituents separated in step (c).

16 – Process according to anyone of claims 1 to 14, which comprises

20        (a) providing a treatment chamber equipped with a cooling device, which treatment chamber is cooled before the treatment;

(b) introducing cooled cellulosic material into the treatment chamber;

(c) supplying the optionally cooled stabilising agent to said treatment chamber so as to contact the stabilising agent with the cellulosic material;

25        (d) optionally, separating excess quantities of stabilising agent or constituents of the stabilising agent from the cellulosic material;

(e) optionally, recovering excess quantities or constituents separated in step (d).

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17 – Process according to anyone of claims 1 to 14, which comprises

- (a) cooling the cellulosic material and optionally cooling the stabilising agent;
- (b) contacting the cellulosic material cooled in step (a) and the stabilising agent optionally cooled in step (a) in a treatment chamber ;
- 5 (c) optionally, separating excess quantities of stabilising agent or constituents of the stabilising agent from the cellulosic material;
- (d) optionally, recovering excess quantities or constituents separated in step (c).

18 – Process according to claim 17, whereby the treatment chamber is not cooled in step (b).

- 10 19 – Process according to claim 17 or claim 18, wherein both cellulosic material and stabilizing agent are cooled prior to contacting them in the treatment chamber.